

State of Montana 457(b) Plan

Investment Performance Evaluation Report

As of September 30, 2017

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Introduction

This report reviews the investment performance of the State of Montana's 457(b) Plan for the quarter ending September 30, 2017, as well as other periods ending on that date. While the most recent quarter is the focus point of this report, we recommend concentration on longer time periods for the consideration of any changes to the investment policy or manager structure.

Performance measurement in this report is designed to:

- Provide an understanding of the environment in which the funds were managed;
- Verify that the assets were managed in compliance with guidelines;
- Assess the managers' strengths, continuity of style, and the means of achieving the performance; and
- Serve as a communications tool for internal focus, as well as to fulfill fiduciary obligations.

This report is based upon data provided by the State of Montana, Morningstar, Empower, and fund management firms.

Plan Overview

Net Assets

- Plan assets totaled \$488.7 million, as of September 30, 2017. This is up from \$477.5 million, as of June 30, 2017.

Asset Allocation

- Plan assets were allocated 48% to the Stable Value fund, 2% to Bond funds, 12% to Target Date/Balanced funds, 29% to U.S. Equity funds, and 8% to International Equity funds.

Fund Overview

As of September 30, 2017

Asset Class	Fund	Ticker	Recommendation	Date of Status Change	Inception Date
Stable Value	State of Montana Stable Value	-	Retain		Sep-13
Fixed Income	Prudential Total Return Bond Q	PTRQX	Retain		Apr-15
Fixed Income	Neuberger Berman High Income Bond Instl	NHILX	Retain		Jun-03
Balanced	Vanguard Balanced Index Instl	VBAIX	Retain		Apr-12
Target Date	T. Rowe Price Retirement Balanced	TRRIX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2005	TRRFX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2010	TRRAX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2015	TRRGX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2020	TRRBX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2025	TRRHX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2030	TRRCX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2035	TRRJX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2040	TRRDX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2045	TRRKX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2050	TRRMX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2055	TRRNX	Retain		Oct-11
Large Value	Vanguard Equity-Income Adm	VEIRX	Retain		Jun-13
Large Blend	Parnassus Core Equity Instl	PRILX	Retain		Apr-15
Large Blend	Vanguard Institutional Index I	VINIX	Retain		May-05
Large Growth	Fidelity Contrafund	FCNTX	Retain		Apr-97
Mid Value	MFS Mid Cap Value R6	MVCKX	Retain		Mar-14
Mid Blend	Vanguard Mid Cap Index Adm	VIMAX	Retain		Aug-16
Mid Growth	Janus Henderson Enterprise N	JDMNX	Retain		Oct-16
Small Value	Neuberger Berman Genesis Tr	NBGEX	Retain		Apr-98
Small Blend	Vanguard Small Cap Index Instl	VSCIX	Retain		Sep-06
Small Growth	Vanguard Small Cap Growth Index Instl	VSGIX	Retain		Sep-10
International	American Funds New Perspective R6	RNPGX	Retain		Jul-04
International	Franklin Mutual Global Discovery Z	MDISX	Retain		Sep-03
International	Dodge & Cox International Stock	DODFX	Retain		Sep-06
International	Artisan International Inv	ARTIX	Retain		Jun-02
International	Oppenheimer Developing Markets Y	ODVYX	Retain		Nov-12

Asset Allocation

As of September 30, 2017

# of Options	Options	Plan Assets	% of Plan	# of Participants
1	State of Montana Stable Value	\$236,739,095	48.4%	5,728
	Total Stable Value Fund	\$236,739,095	48%	
2	Prudential Total Return Bond Q	\$6,864,587	1.4%	1,603
	Neuberger Berman High Income Bond Instl	\$3,549,750	<1%	618
	Total Bond Funds	\$10,414,337	2%	
13	Vanguard Balanced Index Instl	\$21,707,617	4.4%	1,853
	T. Rowe Price Retirement Balanced	\$667,789	<1%	67
	T. Rowe Price Retirement 2005	\$273,225	<1%	32
	T. Rowe Price Retirement 2010	\$1,350,272	<1%	75
	T. Rowe Price Retirement 2015	\$2,583,518	<1%	145
	T. Rowe Price Retirement 2020	\$8,197,417	1.7%	354
	T. Rowe Price Retirement 2025	\$7,036,484	1.4%	434
	T. Rowe Price Retirement 2030	\$4,417,139	<1%	401
	T. Rowe Price Retirement 2035	\$4,850,662	<1%	485
	T. Rowe Price Retirement 2040	\$2,866,212	<1%	404
	T. Rowe Price Retirement 2045	\$2,279,200	<1%	402
	T. Rowe Price Retirement 2050	\$803,111	<1%	164
	T. Rowe Price Retirement 2055	\$666,701	<1%	161
	Total Target Date/Balanced Funds	\$57,699,348	12%	
10	Vanguard Equity-Income Adm	\$19,835,636	4.1%	1,395
	Parnassus Core Equity Instl	\$3,423,608	<1%	532
	Vanguard Institutional Index I	\$32,332,638	6.6%	2,315
	Fidelity Contrafund	\$38,848,935	7.9%	2,221
	MFS Mid Cap Value R6	\$6,289,367	1.3%	712
	Vanguard Mid Cap Index Adm	\$945,773	<1%	144
	Janus Henderson Enterprise N	\$11,505,821	2.4%	1,772
	Neuberger Berman Genesis Tr	\$14,220,324	2.9%	1,823
	Vanguard Small Cap Index Instl	\$7,211,406	1.5%	689
	Vanguard Small Cap Growth Index Instl	\$9,362,410	1.9%	1,225
	Total U.S. Equity Funds	\$143,975,917	29%	
5	American Funds New Perspective R6	\$14,993,787	3.1%	1,313
	Franklin Mutual Global Discovery Z	\$10,447,964	2.1%	884
	Dodge & Cox International Stock	\$10,716,398	2.2%	1,507
	Artisan International Inv	\$2,558,805	<1%	458
	Oppenheimer Developing Markets Y	\$1,127,256	<1%	228
	Total International Equity Funds	\$39,844,211	8%	
	TOTAL	\$488,672,907		

Range of Investment Options

Lower Expected Risk/ Lower Expected Return			Higher Expected Risk/ Higher Expected Return		
Stable Value	Fixed Income/ Bond	Target Date/ Balanced	Domestic Equity		
1. State of Montana Stable Value	1. Prudential Total Return Bond Q	1. Vanguard Balanced Idx Instl	Large Value	Large Blend	Large Growth
	2. Neuberger Berman High Income Bond Instl	2. T. Rowe Price Retirement Series (12)	1. Vanguard Equity Income Adm	1. Vanguard Instl Idx I 2. Parnassus Core Equity Instl*	1. Fidelity Contrafund
			Mid Value	Mid Blend	Mid Growth
			1. MFS Mid Cap Value R6	1. Vanguard Mid Cap Idx Adm	1. Janus Henderson Enterprise N
			Small Value	Small Blend	Small Growth
			1. Neuberger Berman Genesis Tr	1. Vanguard Small Cap Idx Instl	1. Vanguard Small Cap Growth Idx Instl
					Global/ Int'l Equity
					Other
					1. American Funds New Perspective R6 2. Franklin Mutual Global Discovery Z 3. Dodge & Cox Intl Stock 4. Artisan Intl Inv 5. Oppenheimer Developing Mkts Y

*SRI investment option

Net-of-Fee Total Returns and Standard Deviations

As of September 30, 2017

Fund/Benchmark	YTD	(periods longer than 1 year are annualized)						Standard Deviation		Expense Ratio
	10/16/17	3 Months	YTD	1 Year	3 Years	5 Years	10 Years	3 Years	5 Years	
State of Montana Stable Value (net)	-	0.70	2.56	0.41	2.08	1.17	3.45	-	-	0.40
Barclays US Govt/Credit Interm	2.41	0.60	2.34	0.23	2.13	1.61	3.64	2.17	2.11	-
Prudential Total Return Bond Q	5.88	1.39	5.53	2.36	4.11	3.64	6.07	3.40	3.63	0.44
Barclays US Agg Bond	3.35	0.85	3.14	0.07	2.71	2.06	4.27	2.86	2.85	-
Avg Intermediate-Term Bond	3.61	0.88	3.40	0.83	2.51	2.12	4.26	2.74	2.84	0.78
Neuberger Berman High Income Bond Instl	5.73	1.69	5.49	6.46	4.37	5.23	7.46	5.24	5.09	0.69
BofAML US HY Master II Constnd	7.29	2.04	7.04	9.05	5.88	6.39	7.81	5.83	5.24	-
Avg High Yield Bond	6.16	1.79	5.94	7.77	4.17	5.14	6.24	5.30	5.08	1.06

Green indicates fund outperformed both benchmarks / Blue indicates fund performed between benchmarks / Red indicates fund underperformed both benchmarks

Net-of-Fee Total Returns and Standard Deviations

As of September 30, 2017

Fund/Benchmark	YTD	(periods longer than 1 year are annualized)						Standard Deviation		Expense Ratio
	10/16/17	3 Months	YTD	1 Yr	3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	
T. Rowe Price Retirement Balanced	8.75	2.43	8.02	7.53	4.70	5.54	4.70	4.56	4.51	0.56
DJ Target Today	4.80	1.33	4.35	1.71	2.50	2.38	3.98	2.48	2.84	-
Avg Allocation - 30% to 50% Equity	8.08	2.36	7.36	7.04	4.06	5.30	4.38	4.97	4.98	1.18
T. Rowe Price Retirement 2005	9.10	2.43	8.32	7.39	4.97	5.96	4.81	4.74	4.77	0.58
DJ Target 2005	4.84	1.34	4.39	1.74	2.52	2.43	3.90	2.49	2.86	-
Avg Target Date 2000-2010	8.55	2.40	7.74	7.10	4.66	5.51	3.89	4.63	4.61	0.73
T. Rowe Price Retirement 2010	9.91	2.71	9.11	8.39	5.40	6.68	4.88	5.18	5.22	0.57
DJ Target 2010	5.10	1.39	4.63	1.78	2.70	2.91	3.80	2.74	3.11	-
Avg Target Date 2000-2010	8.55	2.40	7.74	7.10	4.66	5.51	3.89	4.63	4.61	0.73
T. Rowe Price Retirement 2015	11.35	2.96	10.37	9.99	6.04	7.75	5.22	5.97	6.00	0.59
DJ Target 2015	6.39	1.71	5.80	2.41	3.45	3.95	3.90	3.48	3.69	-
Avg Target Date 2015	9.45	2.65	8.55	8.05	5.01	6.23	4.08	5.17	5.25	0.75
T. Rowe Price Retirement 2020	13.42	3.43	12.25	12.03	6.83	8.81	5.51	6.84	6.75	0.63
DJ Target 2020	8.30	2.23	7.50	4.61	4.30	5.27	4.16	4.11	4.38	-
Avg Target Date 2020	10.32	2.86	9.26	8.92	5.22	6.40	4.12	5.58	5.52	0.83
T. Rowe Price Retirement 2025	15.10	3.77	13.74	13.73	7.46	9.75	5.73	7.60	7.46	0.67
DJ Target 2025	9.85	2.62	8.81	6.83	5.15	6.61	4.50	5.06	5.32	-
Avg Target Date 2025	12.06	3.30	10.82	10.85	5.92	7.54	4.42	6.55	6.48	0.81
T. Rowe Price Retirement 2030	16.56	4.05	15.05	15.32	8.03	10.54	5.95	8.25	8.02	0.69
DJ Target 2030	11.84	3.17	10.53	9.65	6.14	8.01	4.87	6.30	6.43	-
Avg Target Date 2030	13.53	3.69	12.11	12.52	6.49	8.23	4.45	7.42	7.22	0.86

Net-of-Fee Total Returns and Standard Deviations

As of September 30, 2017

Fund/Benchmark	YTD	(periods longer than 1 year are annualized)						Standard Deviation		Expense Ratio
	10/16/17	3 Months	YTD	1 Yr	3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	
T. Rowe Price Retirement 2035	17.80	4.30	16.14	16.60	8.45	11.12	6.11	8.82	8.53	0.72
DJ Target 2035	13.62	3.65	12.06	12.19	6.90	9.16	5.19	7.54	7.52	-
Avg Target Date 2035	15.02	4.08	13.46	14.35	7.03	9.12	4.73	8.26	8.03	0.84
T. Rowe Price Retirement 2040	18.70	4.50	16.98	17.62	8.74	11.51	6.30	9.30	8.93	0.74
DJ Target 2040	15.10	4.05	13.34	14.31	7.53	10.05	5.50	8.55	8.38	-
Avg Target Date 2040	15.83	4.30	14.16	15.27	7.31	9.41	4.73	8.71	8.41	0.88
T. Rowe Price Retirement 2045	19.01	4.57	17.29	17.98	8.86	11.59	6.34	9.31	8.94	0.74
DJ Target 2045	16.13	4.33	14.22	15.77	7.95	10.58	5.76	9.21	8.92	-
Avg Target Date 2045	16.61	4.50	14.87	16.14	7.57	9.82	4.88	9.10	8.77	0.84
T. Rowe Price Retirement 2050	18.95	4.55	17.20	17.99	8.85	11.58	6.33	9.31	8.92	0.74
DJ Target 2050	16.61	4.47	14.63	16.42	8.14	10.73	5.83	9.44	9.09	-
Avg Target Date 2050	16.72	4.53	14.92	16.18	7.63	9.81	4.87	9.13	8.81	0.88
T. Rowe Price Retirement 2055	18.98	4.54	17.16	17.95	8.85	11.56	6.32	9.33	8.95	0.74
DJ Target 2055	16.64	4.48	14.65	16.45	8.15	10.74	5.84	9.45	9.09	-
Avg Target Date 2055	17.07	4.62	15.26	16.60	7.82	10.21	6.06	9.24	8.90	0.85
Vanguard Balanced Index Instl	10.66	3.02	9.52	10.81	7.57	9.29	6.66	6.00	5.87	0.06
Custom Vanguard Bal Index ⁽¹⁾	10.69	3.07	9.61	10.94	7.71	9.43	6.97	6.00	5.87	-
Avg Allocation - 50% to 70% Equity	10.39	3.01	9.40	10.52	5.38	7.51	5.07	6.91	6.74	1.16
Barclays US Agg Bond	3.35	0.85	3.14	0.07	2.71	2.06	4.27	2.86	2.85	-
S&P 500	16.07	4.48	14.24	18.61	10.81	14.22	7.44	10.07	9.55	-

⁽¹⁾ Reflects fund's index changes over time. 60% DJ US Total Market Index/40% Barclays US Agg Float Adj Index since 1/14/13.

Net-of-Fee Total Returns and Standard Deviations

As of September 30, 2017

Fund/Benchmark	YTD	(periods longer than 1 year are annualized)						Standard Deviation		Expense Ratio
	10/16/17	3 Months	YTD	1 Year	3 Years	5 Years	10 Years	3 Years	5 Years	
Vanguard Equity-Income Adm	13.20	4.49	11.42	16.75	10.31	13.38	7.76	9.31	9.03	0.17
Russell 1000 Value	8.97	3.11	7.92	15.12	8.53	13.20	5.92	10.31	9.93	-
Avg Large Value	10.53	3.80	9.41	16.17	7.99	12.23	5.72	10.79	10.24	1.06
Parnassus Core Equity Institutional	11.36	3.39	10.67	13.15	9.06	13.70	9.55	8.77	9.03	0.66
Vanguard Institutional Index I	16.03	4.48	14.21	18.57	10.79	14.19	7.44	10.07	9.55	0.04
S&P 500	16.07	4.48	14.24	18.61	10.81	14.22	7.44	10.07	9.55	-
Avg Large Blend	14.75	4.19	13.19	17.65	9.03	12.91	6.58	10.38	9.96	1.00
Fidelity Contrafund	26.93	6.09	23.90	23.21	12.03	14.55	8.52	9.91	9.84	0.68
S&P 500	16.07	4.48	14.24	18.61	10.81	14.22	7.44	10.07	9.55	-
Avg Large Growth	22.03	5.29	19.85	19.75	10.36	13.70	7.55	11.40	10.99	1.15
MFS Mid Cap Value R6	9.68	2.48	8.81	13.95	9.26	14.13	7.77	10.70	10.46	0.74
Russell Mid Cap Value	8.51	2.14	7.43	13.37	9.19	14.33	7.85	10.49	10.39	-
Avg Mid Value	8.26	3.06	7.46	14.83	7.90	12.71	6.85	11.65	11.42	1.15
Vanguard Mid Cap Index Adm	14.35	3.43	12.88	15.30	9.72	14.39	7.95	10.66	10.44	0.06
Custom Vanguard MC Index ⁽¹⁾	14.38	3.43	12.92	15.33	9.77	14.44	7.99	10.67	10.44	-
Avg Mid Blend	11.16	3.57	9.92	15.93	8.00	12.86	6.86	11.44	11.33	1.12
Janus Henderson Enterprise N	22.16	5.20	20.02	20.45	14.53	16.61	9.50	10.14	9.60	0.68
Russell Mid Cap Growth	19.61	5.28	17.29	17.82	9.96	14.18	8.20	11.05	10.88	-
Avg Mid Growth	18.53	4.63	16.84	18.18	9.13	12.62	6.92	11.90	11.66	1.23

⁽¹⁾ Reflects changes to fund's index over time. S&P MidCap 400 Index through 5/15/2003; MSCI US MidCap 450 Index through 1/30/2013; and the CRSP US Mid Cap Index thereafter.

Net-of-Fee Total Returns and Standard Deviations

As of September 30, 2017

Fund/Benchmark	YTD	(periods longer than 1 year are annualized)						Standard Deviation		Expense Ratio
	10/16/17	3 Months	YTD	1 Year	3 Years	5 Years	10 Years	3 Years	5 Years	
Neuberger Berman Genesis Tr	10.78	4.00	9.31	17.15	10.94	12.52	8.11	11.50	11.42	1.10
Russell 2000	11.85	5.67	10.94	20.74	12.18	13.79	7.85	14.48	14.00	-
Avg Small Value	5.72	4.69	4.82	17.89	9.17	12.32	7.10	14.86	14.20	1.29
Vanguard Small Cap Index Instl	11.80	4.59	10.60	17.38	10.45	13.95	8.61	12.33	12.22	0.05
Custom Vanguard SC Index ⁽¹⁾	11.77	4.58	10.59	17.33	10.41	13.91	8.51	12.33	12.21	-
Avg Small Blend	9.33	5.10	8.45	18.91	10.01	12.83	7.19	13.86	13.47	1.22
Vanguard Small Cap Growth Index Instl	16.77	4.78	15.29	16.93	9.57	12.78	8.42	12.48	12.49	0.06
Custom Vanguard SC Growth Index ⁽²⁾	16.74	4.76	15.25	16.85	9.48	12.62	8.19	12.47	12.48	-
Avg Small Growth	16.85	5.62	15.93	20.40	11.15	13.02	7.57	14.23	13.88	1.29
American Funds New Perspective R6	26.72	5.49	23.52	21.22	10.73	12.86	6.69	10.56	10.09	0.45
MSCI ACWI	19.46	5.18	17.25	18.65	7.43	10.20	3.88	10.57	9.94	-
Franklin Mutual Global Discovery Z	9.08	1.88	8.68	15.53	6.19	9.96	5.51	9.64	8.89	0.98
MSCI World	17.77	4.84	16.01	18.17	7.69	10.99	4.22	10.43	9.86	-
Avg World Large Stock	19.46	4.71	17.60	17.50	7.21	10.39	3.98	10.67	10.40	1.21
Dodge & Cox International Stock	23.49	6.94	22.47	26.58	3.87	10.13	2.98	14.62	13.51	0.64
MSCI EAFE	21.88	5.40	19.96	19.10	5.04	8.38	1.34	12.27	11.73	-
Avg Foreign Large Blend	22.30	5.34	20.33	18.01	5.07	7.74	1.22	11.65	11.26	1.09
Artisan International Inv	28.07	5.59	26.04	15.39	3.23	7.47	2.45	12.14	11.68	1.19
MSCI EAFE	21.88	5.40	19.96	19.10	5.04	8.38	1.34	12.27	11.73	-
Avg Foreign Large Growth	27.92	6.51	25.37	18.47	6.96	8.81	2.25	11.68	11.32	1.22
Oppenheimer Developing Markets Y	33.31	8.27	28.56	21.99	3.47	5.19	4.43	14.56	13.76	1.07
MSCI EM	33.74	7.89	27.78	22.46	4.90	3.99	1.32	15.73	14.40	-
Avg Diversified Emerging Mkts	30.48	7.32	26.19	19.93	3.86	4.09	1.27	14.71	13.96	1.46

⁽¹⁾ Reflects changes to fund's index over time. Russell 2000 Index through 5/16/03; MSCI US Small Cap 1750 Index through 1/30/13; and the CRSP US Small Cap Index thereafter.

⁽²⁾ Reflects changes to fund's index over time. S&P SmallCap 600 Growth Index through 5/16/03; MSCI US Small Cap Growth Index through 4/16/13; and the CRSP US Small Cap Growth Index thereafter.

Modern Portfolio Theory (MPT) Analytics

As of September 30, 2017

Fund/Benchmark	5 - Year						10 Year Batting Average
	Alpha	Beta	Tracking Error	Information Ratio	Upside Capture	Downside Capture	
Vanguard Equity-Income Adm	0.38	0.91	2.47	-0.34	94	93	44
Avg Large Value	-1.50	0.98	4.00	-0.53	93	103	43
Parnassus Core Equity Institutional	0.90	0.90	3.04	-0.17	94	90	53
Vanguard Institutional Index I	-0.03	1.00	0.01	-2.31	100	100	37
Avg Large Blend	-1.12	1.00	2.55	-1.25	96	105	42
Fidelity Contrafund	1.32	0.93	4.35	0.08	98	89	55
Avg Large Growth	-0.66	1.02	4.84	-0.15	100	107	51
MFS Mid Cap Value R6	0.04	1.00	4.34	-0.02	99	100	55
Avg Mid Value	-1.60	1.03	5.77	-0.24	97	110	49
Vanguard Mid Cap Index Adm	-0.16	1.03	3.53	0.05	101	102	57
Avg Mid Blend	-1.48	1.03	5.58	-0.24	98	111	50
Janus Henderson Enterprise N	3.78	0.88	4.83	0.50	101	76	55
Avg Mid Growth	-1.72	1.04	6.11	-0.27	98	114	51
Neuberger Berman Genesis Tr	-1.12	0.99	6.48	-0.26	94	103	53
Avg Small Value	-2.39	1.09	9.67	-0.20	101	126	50
Vanguard Small Cap Index Instl	-1.37	1.10	6.26	-0.04	107	122	55
Avg Small Blend	-2.12	1.10	8.51	-0.17	103	124	51
Vanguard Small Cap Growth Index Instl	-2.18	1.09	6.95	-0.21	104	128	57
Avg Small Growth	-1.91	1.10	9.09	-0.13	105	127	53
American Funds New Perspective R6	6.69	0.80	4.71	1.25	99	56	56
Franklin Mutual Global Discovery Z	5.07	0.64	6.39	0.47	79	47	55
Avg World Large Stock	4.59	0.78	5.73	0.60	92	63	54
Dodge & Cox International Stock	2.41	1.11	4.56	0.69	121	108	57
Avg Foreign Large Blend	1.26	0.92	3.80	0.21	97	89	49
Artisan International Inv	1.21	0.90	5.46	0.09	96	90	49
Avg Foreign Large Growth	2.44	0.89	4.74	0.38	97	82	52
Oppenheimer Developing Markets Y	-1.84	1.06	6.32	-0.28	100	113	60
Avg Diversified Emerging Mkts	-2.46	1.00	7.90	-0.37	93	111	51

Reported modern portfolio theory (MPT) statistics are calculated with respect to the S&P 500 Index for domestic equity funds and the MSCI EAFE Index for international equity funds.

Stable Value and Bond Funds

Annual Net-of-Fee Total Returns

Fund/Benchmark	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
State of Montana Stable Value	2.13	0.84	2.15	-1.95	4.82	5.04	6.47	13.71	-3.45	9.35
Barclays US Govt/Credit Interm	2.08	1.07	3.13	-0.86	3.89	5.80	5.89	5.24	5.08	7.39
Prudential Total Return Bond Q	4.83	0.09	7.25	-0.91	9.96	7.93	9.73	19.68	-3.55	5.42
Barclays US Agg Bond	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93	5.24	6.97
Avg Intermediate-Term Bond	3.23	-0.26	5.18	-1.42	7.01	5.86	7.72	13.97	-4.70	4.70
Neuberger Berman High Income Bond Instl	14.17	-4.77	1.51	7.57	14.64	3.12	14.71	52.16	-19.09	1.61
BofAML US HY Master II Constnd	17.49	-4.61	2.51	7.41	15.55	4.37	15.07	58.10	-26.11	2.53
Avg High Yield Bond	13.30	-4.01	1.11	6.90	14.67	2.83	14.24	46.70	-26.41	1.47

Green indicates fund outperformed both benchmarks / Blue indicates fund performed between benchmarks / Red indicates fund underperformed both benchmarks

Target Date Funds

Annual Net-of-Fee Total Returns

Fund/Benchmark	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
T. Rowe Price Retirement Balanced	6.48	-0.74	3.91	9.15	10.05	1.43	10.10	22.07	-18.39	6.09
DJ Target Today	3.01	-0.63	3.86	1.41	5.44	5.26	8.53	10.83	-3.06	6.48
Avg Allocation - 30% to 50% Equity	6.63	-2.32	4.02	7.23	9.40	1.70	10.03	20.77	-18.61	4.53
T. Rowe Price Retirement 2005	6.72	-0.75	4.72	9.74	11.35	1.43	11.51	24.55	-22.24	6.67
DJ Target 2005	3.00	-0.63	3.92	1.54	5.66	5.15	8.90	11.89	-5.47	6.84
Avg Target Date 2000-2010	5.90	-1.18	4.10	8.30	9.61	0.91	10.68	22.42	-22.46	5.22
T. Rowe Price Retirement 2010	7.11	-0.76	4.99	11.93	12.44	0.54	12.70	27.95	-26.71	6.65
DJ Target 2010	3.33	-0.72	4.20	3.00	6.40	4.49	9.71	14.11	-10.81	7.73
Avg Target Date 2000-2010	5.90	-1.18	4.10	8.30	9.61	0.91	10.68	22.42	-22.46	5.22
T. Rowe Price Retirement 2015	7.31	-0.58	5.37	15.18	13.81	-0.32	13.79	31.35	-30.22	6.75
DJ Target 2015	4.51	-0.97	4.48	5.49	7.65	3.42	10.94	17.32	-16.65	7.78
Avg Target Date 2015	6.02	-1.34	4.48	9.65	10.65	-0.27	11.50	23.55	-27.76	5.84
T. Rowe Price Retirement 2020	7.41	-0.31	5.63	18.05	15.01	-1.20	14.74	34.19	-33.48	6.73
DJ Target 2020	5.27	-1.04	4.81	9.05	9.23	2.01	12.42	20.95	-22.31	8.11
Avg Target Date 2020	6.12	-1.57	4.72	11.57	11.68	-0.22	12.27	24.25	-29.46	6.02
T. Rowe Price Retirement 2025	7.55	-0.17	5.84	20.78	16.00	-2.06	15.37	36.29	-35.90	6.81
DJ Target 2025	6.39	-1.11	5.14	12.84	10.94	0.49	14.12	25.36	-27.61	8.31
Avg Target Date 2025	6.61	-1.59	5.07	15.30	13.03	-2.06	13.29	28.32	-34.15	6.52
T. Rowe Price Retirement 2030	7.69	-0.02	6.05	23.09	16.82	-2.70	16.01	37.99	-37.79	6.83
DJ Target 2030	7.50	-1.21	5.50	16.59	12.56	-1.20	15.67	29.50	-32.02	8.43
Avg Target Date 2030	7.21	-1.79	5.04	16.65	13.59	-2.26	13.47	28.87	-36.04	6.50

Target Date Funds

Annual Net-of-Fee Total Returns

Fund/Benchmark	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
T. Rowe Price Retirement 2035	7.64	0.13	6.07	24.86	17.35	-3.26	16.34	39.04	-38.88	6.81
DJ Target 2035	8.49	-1.61	5.80	19.90	13.92	-2.62	16.89	32.71	-35.15	8.48
Avg Target Date 2035	7.45	-1.76	5.24	20.00	14.64	-3.51	14.28	30.06	-37.04	7.02
T. Rowe Price Retirement 2040	7.63	0.17	6.18	25.93	17.55	-3.49	16.51	39.07	-38.85	6.77
DJ Target 2040	9.30	-1.94	6.03	22.38	14.88	-3.59	17.67	34.64	-36.80	8.48
Avg Target Date 2040	7.84	-1.99	5.25	19.97	14.64	-3.49	14.37	30.90	-37.94	6.21
T. Rowe Price Retirement 2045	7.69	0.17	6.14	25.93	17.62	-3.47	16.44	39.10	-38.83	6.84
DJ Target 2045	9.85	-2.15	6.16	23.71	15.32	-3.99	17.95	35.09	-37.03	8.46
Avg Target Date 2045	7.78	-1.87	5.35	22.00	15.31	-4.10	14.60	30.88	-38.11	6.89
T. Rowe Price Retirement 2050	7.71	0.19	6.19	25.90	17.55	-3.36	16.41	38.92	-38.80	6.82
DJ Target 2050	10.10	-2.23	6.19	23.89	15.35	-4.00	17.95	35.09	-37.03	8.46
Avg Target Date 2050	8.15	-2.01	5.42	21.02	15.07	-3.82	14.53	32.02	-38.67	5.91
T. Rowe Price Retirement 2055	7.73	0.18	6.18	25.86	17.60	-3.35	16.41	38.97	-38.89	6.82
DJ Target 2055	10.11	-2.23	6.19	23.89	15.35	-4.00	17.95	35.09	-37.03	8.47
Avg Target Date 2055	7.83	-1.71	5.49	23.14	15.52	-4.13	14.45	32.20	-38.86	5.94
Vanguard Balanced Index Instl	8.81	0.52	10.00	18.11	11.51	4.31	13.34	20.18	-22.10	6.34
Custom Vanguard Bal Index	8.89	0.76	10.06	18.25	11.71	4.66	13.45	20.34	-20.94	6.53
Avg Allocation - 50% to 70% Equity	7.32	-1.93	6.21	16.48	11.72	-0.11	11.83	24.13	-28.00	5.99
Barclays US Agg Bond	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93	5.24	6.97
S&P 500	11.96	1.38	13.69	32.39	16.00	2.11	15.06	26.46	-37.00	5.49

Large and Mid-Cap Stock Funds

Annual Net-of-Fee Total Returns

Fund/Benchmark	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Vanguard Equity-Income Adm	14.82	0.86	11.38	30.19	13.58	10.69	14.99	17.26	-30.86	4.99
Russell 1000 Value	17.34	-3.83	13.45	32.53	17.51	0.39	15.51	19.69	-36.85	-0.17
Avg Large Value	14.81	-4.05	10.21	31.21	14.57	-0.75	13.66	24.13	-37.09	1.42
Parnassus Core Equity Institutional	10.60	-0.33	14.70	34.15	15.64	3.38	9.10	28.96	-22.74	14.37
Vanguard Institutional Index I	11.93	1.37	13.65	32.35	15.98	2.09	15.05	26.63	-36.95	5.47
S&P 500	11.96	1.38	13.69	32.39	16.00	2.11	15.06	26.46	-37.00	5.49
Avg Large Blend	10.37	-1.07	10.96	31.50	14.96	-1.27	14.01	28.17	-37.79	6.16
Fidelity Contrafund	3.36	6.46	9.56	34.15	16.26	-0.14	16.93	29.23	-37.16	19.78
S&P 500	11.96	1.38	13.69	32.39	16.00	2.11	15.06	26.46	-37.00	5.49
Avg Large Growth	3.23	3.60	10.00	33.92	15.34	-2.46	15.53	35.68	-40.67	13.35
MFS Mid Cap Value R6	15.86	-2.14	10.29	36.63	18.52	-2.04	27.08	39.75	-41.90	1.67
Russell Mid Cap Value	20.00	-4.78	14.75	33.46	18.51	-1.38	24.75	34.21	-38.44	-1.42
Avg Mid Value	18.06	-5.41	9.31	35.14	16.60	-3.96	21.92	35.41	-36.77	0.83
Vanguard Mid Cap Index Adm	11.22	-1.34	13.76	35.15	15.99	-1.97	25.59	40.48	-41.78	6.17
Custom Vanguard MC Index	11.25	-1.28	13.83	35.21	16.04	-1.91	25.69	40.49	-41.80	6.19
Avg Mid Blend	14.14	-4.75	7.80	34.10	16.15	-3.81	22.52	37.39	-39.18	4.85
Janus Henderson Enterprise N	12.18	3.57	12.19	30.94	17.79	-1.78	25.93	42.90	-43.13	21.81
Russell Mid Cap Growth	7.33	-0.20	11.90	35.74	15.81	-1.65	26.38	46.29	-44.32	11.43
Avg Mid Growth	6.03	-0.95	7.00	34.93	14.07	-3.96	24.61	39.11	-43.77	15.09

Small Cap and International Stock Funds

Annual Net-of-Fee Total Returns

Fund/Benchmark	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Neuberger Berman Genesis Tr	18.06	0.15	-0.31	36.89	9.82	4.60	21.38	26.25	-32.85	21.80
Russell 2000	21.31	-4.41	4.89	38.82	16.35	-4.18	26.85	27.17	-33.79	-1.57
Avg Small Value	25.99	-6.71	3.34	36.22	16.00	-4.45	26.17	31.32	-32.24	-6.08
Vanguard Small Cap Index Instl	18.32	-3.63	7.53	37.80	18.26	-2.65	27.95	36.40	-35.98	1.29
Custom Vanguard SC Index	18.26	-3.68	7.54	37.77	18.20	-2.75	27.82	36.15	-36.20	1.20
Avg Small Blend	20.78	-5.38	3.79	37.39	15.46	-4.07	25.61	31.80	-36.56	-1.10
Vanguard Small Cap Growth Index Instl	10.74	-2.52	4.04	38.20	17.68	-1.40	30.96	42.13	-39.91	9.78
Custom Vanguard SC Growth Index	10.62	-2.60	3.98	37.87	17.24	-1.64	30.58	41.79	-40.17	9.62
Avg Small Growth	11.20	-2.41	2.44	40.91	13.15	-3.55	26.98	35.46	-41.55	7.59
American Funds New Perspective R6	2.19	5.63	3.56	27.23	21.19	-7.33	13.11	37.73	-37.83	16.04
MSCI ACWI	7.86	-2.36	4.16	22.80	16.13	-7.35	12.67	34.63	-42.19	11.66
Franklin Mutual Global Discovery Z	12.86	-3.36	5.33	25.64	13.65	-2.68	11.37	21.31	-26.55	11.32
MSCI World	7.51	-0.87	4.94	26.68	15.83	-5.54	11.76	29.99	-40.71	9.04
Avg World Large Stock	5.54	-1.69	2.79	25.19	15.84	-7.93	13.74	35.27	-41.91	11.28
Dodge & Cox International Stock	8.26	-11.35	0.08	26.31	21.03	-15.97	13.69	47.46	-46.69	11.71
MSCI EAFE	1.00	-0.81	-4.90	22.78	17.32	-12.14	7.75	31.78	-43.38	11.17
Avg Foreign Large Blend	0.79	-1.59	-4.98	19.44	18.29	-13.97	10.24	31.24	-43.99	12.71
Artisan International Inv	-9.66	-3.85	-0.97	25.18	25.39	-7.26	5.91	39.77	-46.96	19.73
MSCI EAFE	1.00	-0.81	-4.90	22.78	17.32	-12.14	7.75	31.78	-43.38	11.17
Avg Foreign Large Growth	-2.14	0.95	-3.92	18.58	17.70	-12.30	14.78	38.02	-46.56	16.26
Oppenheimer Developing Markets Y	7.17	-13.84	-4.55	8.68	21.29	-17.85	27.39	82.10	-47.84	34.30
MSCI EM	11.19	-14.92	-2.19	-2.60	18.22	-18.42	18.88	78.51	-53.33	39.42
Avg Diversified Emerging Mkts	8.47	-13.79	-3.01	-0.14	18.15	-19.86	19.26	73.81	-54.44	36.68

Peer Group Rankings

As of September 30, 2017

Yellow shading indicates above median performance in Morningstar peer group (1 = Best Ranking / 100 = Worst Ranking)

Fund	Morningstar Category	3 Mo	YTD	1 Yr	3 Yr	5 Yr	10 Yr
Prudential Total Return Bond Q	Intermediate-Term Bond	5	3	11	3	3	2
Neuberger Berman High Income Bond Instl	High Yield Bond	58	70	79	53	53	12
T. Rowe Price Retirement Balanced	Allocation - 30% to 50% Equity	47	38	43	35	44	38
T. Rowe Price Retirement 2005	Target Date 2000-2010	57	28	54	36	35	9
T. Rowe Price Retirement 2010	Target Date 2000-2010	17	16	19	10	7	3
T. Rowe Price Retirement 2015	Target Date 2015	23	13	15	8	2	1
T. Rowe Price Retirement 2020	Target Date 2020	14	1	4	1	1	1
T. Rowe Price Retirement 2025	Target Date 2025	15	1	1	1	2	1
T. Rowe Price Retirement 2030	Target Date 2030	20	1	7	1	3	2
T. Rowe Price Retirement 2035	Target Date 2035	29	5	9	2	3	2
T. Rowe Price Retirement 2040	Target Date 2040	32	1	9	4	2	1
T. Rowe Price Retirement 2045	Target Date 2045	41	5	8	3	3	4
T. Rowe Price Retirement 2050	Target Date 2050	52	7	9	5	3	4
T. Rowe Price Retirement 2055	Target Date 2055	61	8	12	5	5	1
Vanguard Balanced Index Instl	Allocation - 50% to 70% Equity	54	52	48	8	14	12

Peer Group Rankings

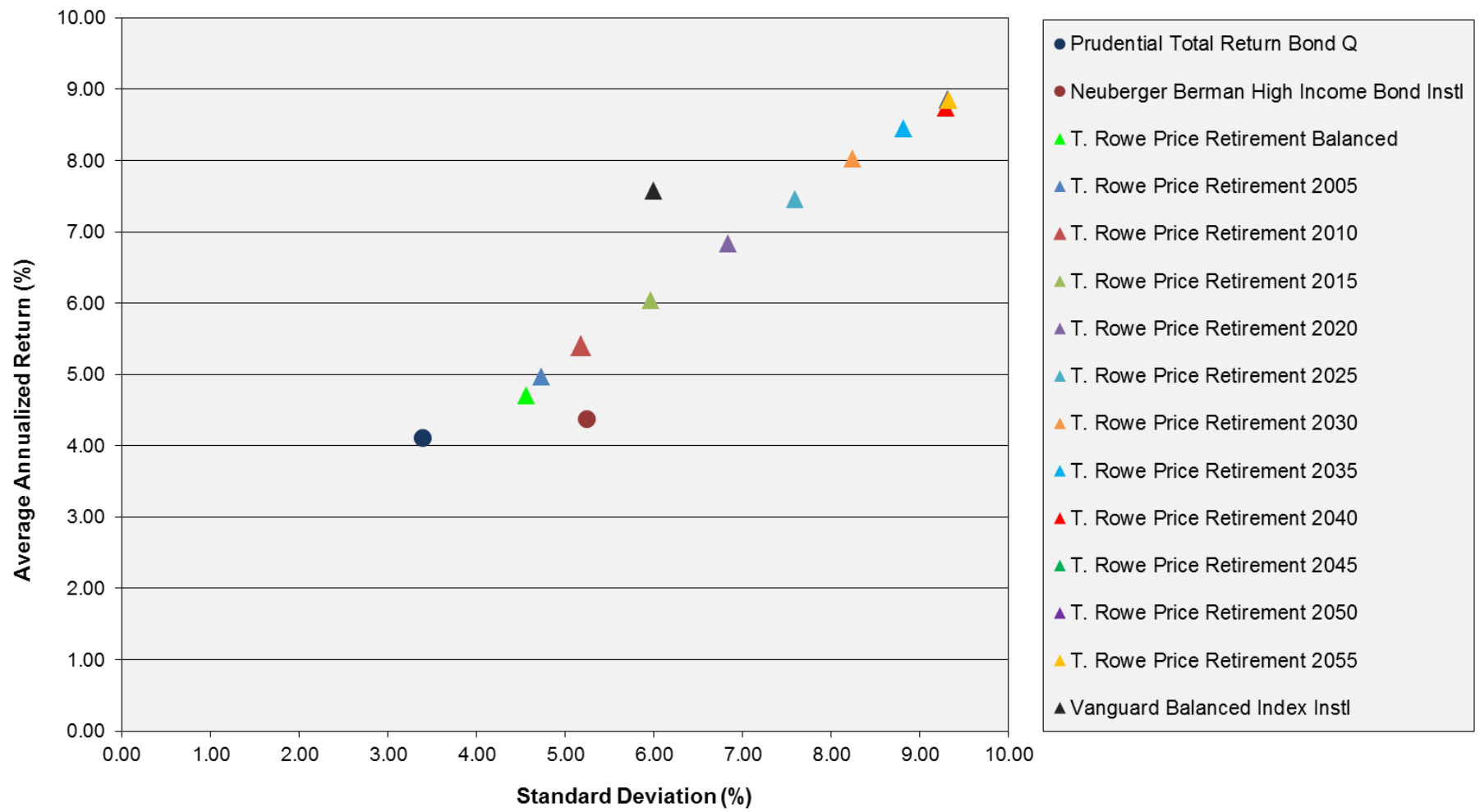
As of September 30, 2017

Yellow shading indicates above median performance in Morningstar peer group (1 = Best Ranking / 100 = Worst Ranking)

Fund	Morningstar Category	3 Mo	YTD	1 Yr	3 Yr	5 Yr	10 Yr
Vanguard Equity-Income Adm	Large Value	26	24	46	8	25	6
Parnassus Core Equity Institutional	Large Blend	78	85	91	60	39	2
Vanguard Institutional Index I	Large Blend	36	27	36	13	17	21
Fidelity Contrafund	Large Growth	29	22	19	29	36	29
MFS Mid Cap Value R6	Mid-Cap Value	69	31	61	36	28	33
Vanguard Mid Cap Index Adm	Mid-Cap Blend	52	14	59	34	17	34
Janus Henderson Enterprise N	Mid-Cap Growth	33	25	25	2	4	9
Neuberger Berman Genesis Tr	Small Growth	83	89	80	56	62	38
Vanguard Small Cap Index Instl	Small Blend	68	26	69	54	36	18
Vanguard Small Cap Growth Index Instl	Small Growth	68	51	82	73	56	29
American Funds New Perspective R6	World Large Stock	27	13	16	7	12	5
Franklin Mutual Global Discovery Z	World Large Stock	96	99	68	68	58	15
Dodge & Cox International Stock	Foreign Large Blend	10	23	1	78	7	13
Artisan International Inv	Foreign Large Growth	60	39	79	98	79	45
Oppenheimer Developing Markets Y	Diversified Emerging Mkts	35	37	39	63	28	2

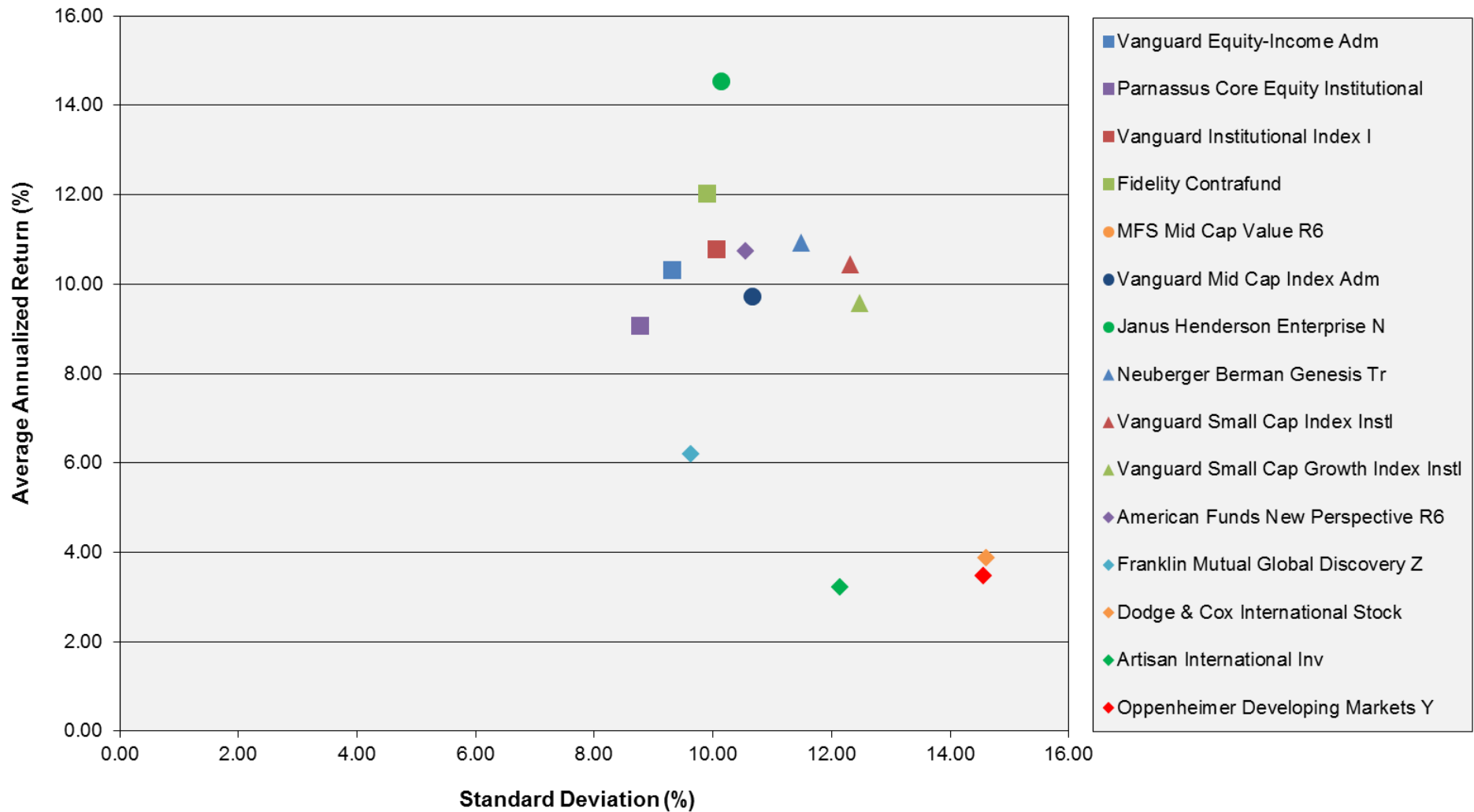
Three Year Risk/Return Profile

Bond and Target Date/Balanced Funds
As of September 30, 2017



Three Year Risk/Return Profile

Equity Funds
As of September 30, 2017



Stable Value Performance as of September 30, 2017

	Quarter	YTD	1 Year	Annualized			Management Fees	Wrap Fees
				3 Years	5 years	10 years		
Montana Stable Value (market, gross)	0.75	2.70	0.61	2.30	1.41	3.72	0.20	0.20
Barclays US Govt/Credit Interm	0.60	2.34	0.23	2.13	1.61	3.64	-	-

Stable Value Portfolio Characteristics as of September 30, 2017

	Yield-to Maturity (%)	Effective Duration (years)	Effective Maturity (years)	Average Credit Quality	Credit Quality Distribution (%)				
					Investment Grade				High Yield
					AAA	AA	A	BBB	Below BBB
Montana Stable Value	2.32	3.99	4.35	AA	52	0	32	16	0
Barclays US Govt/Credit Interm	2.11	4.05	4.40	AA	65	4	13	17	0

Market to Book Value Ratio

End of Month	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Sep-16	Dec-16	Mar-17	Jun-17	Sep-17
Market-to-Book Value Ratio (%)	103.3	104.1	103.0	103.2	104.2	102.9	103.0	101.7	103.4	104.3	104.1	101.3	101.4	101.9	102.0

Fixed Income Portfolio Characteristics

As of September 30, 2017

Fund/Benchmark	Average Maturity (years)	Average Duration (years)	Average Credit Quality	Total Number of Holdings
Prudential Total Return Bond Q	7.9	6.2	BBB	2,406
BarCap Aggregate	8.3	6.0	AA	9,460
Avg Intermediate Term Bond	7.1	5.2	BBB	763
Neuberger Berman High Income Bond Instl	5.2	3.7	B	395
Avg High Yield Bond	5.5	3.2	B	598

Fund/Benchmark	Investment Grade				High Yield Bonds			Other
	AAA	AA	A	BBB	BB	B	Below B	NR/NA
Prudential Total Return Bond Q	42	7	16	20	6	4	0	5
BarCap Aggregate	71	4	11	14	0	0	0	0
Avg Intermediate Term Bond	37	9	24	23	4	1	1	1
Neuberger Berman High Income Bond Instl	3	0	0	7	49	34	7	0
Avg High Yield Bond	2	0	2	5	32	41	16	2

Equity Portfolio Style Characteristics

As of September 30, 2017

Vanguard Equity-
Income Adm

45	30	15
7	1	0
1	1	0

Parnassus Core
Equity Institutional

25	38	14
3	11	5
1	1	1

Vanguard
Institutional Index I

28	29	30
5	5	3
0	0	0

Fidelity Contrafund

16	14	61
1	2	7
0	0	1

MFS Mid Cap
Value R6

8	6	5
32	21	13
6	8	2

Vanguard Mid Cap
Index Adm

1	2	10
30	31	25
0	0	0

Janus Henderson
Enterprise N

0	3	21
4	15	50
2	2	3

Neuberger
Berman Genesis
Tr

0	0	1
2	11	30
6	19	31

Vanguard Small
Cap Index Instl

0	0	0
10	14	21
19	19	18

Vanguard Small
Cap Growth Index
Instl

0	0	0
3	11	37
4	13	32

American Funds
New Perspective
R6

13	24	54
1	3	4
0	0	0

Franklin Mutual
Global Discovery
Z

32	33	21
5	6	0
0	1	1

Dodge & Cox
International Stock

35	44	19
0	2	1
0	0	0

Artisan
International Inv

23	32	37
0	1	5
0	0	0

Oppenheimer
Developing
Markets Y

6	40	48
1	2	4
0	0	0

Style Legend

Large Value	Large Core	Large Growth	50% <	54
Mid Value	Mid Core	Mid Growth	25% <	27
Small Value	Small Core	Small Growth	10% <	19

Equity Portfolio Characteristics

As of September 30, 2017

Fund/Benchmark	Geo Avg Market Cap \$MM	P/E Ratio	P/B Ratio	Total Number of Holdings	% Assets in Top 10 Holdings	Turnover Ratio	% Non- US Equity	% Emerging Mkts Equity
Vanguard Equity-Income Adm	\$90,909	20.5	2.7	193	28	26	10	0
Russell 1000 Value	\$58,501	18.8	2.0	717	23			
Avg Large Value	\$89,138	18.8	2.2	-	32	61	5	0
Parnassus Core Equity Institutional	\$52,909	20.5	3.6	40	41	23	3	0
Vanguard Institutional Index I	\$89,735	22.0	3.1	509	19	5	1	0
S&P 500	\$89,821	22.0	3.1	505	19			
Avg Large Blend	\$118,967	21.9	3.1	-	32	55	3	1
Fidelity Contrafund	\$115,287	25.9	3.8	312	37	41	8	3
S&P 500	\$89,821	22.0	3.1	505	19			
Avg Large Growth	\$118,644	26.8	4.7	-	46	59	6	3
MFS Mid Cap Value R6	\$10,167	20.0	2.1	152	12	27	3	0
Russell Mid Cap Value	\$11,410	18.1	1.9	588	7			
Avg Mid Value	\$10,071	18.9	1.9	-	15	64	4	1
Vanguard Mid Cap Index Adm	\$13,506	22.2	2.6	352	7	15	1	0
CRSP US Mid Cap	\$13,507	22.2	2.6	338	7			
Avg Mid Blend	\$7,316	22.3	2.5	-	14	66	2	0
Janus Henderson Enterprise N	\$10,478	29.9	4.6	85	20	8	11	1
Russell Mid Cap Growth	\$12,711	27.4	5.5	423	9			
Avg Mid Growth	\$11,374	28.4	4.1	-	26	64	3	1

Equity Portfolio Characteristics

As of September 30, 2017

Fund/Benchmark	Geo Avg Market Cap \$MM	P/E Ratio	P/B Ratio	Total Number of Holdings	% Assets in Top 10 Holdings	Turnover Ratio	% Non- US Equity	% Emerging Mkts Equity
Neuberger Berman Genesis Tr	\$3,733	27.4	3.8	130	18	16	4	0
Russell 2000	\$1,778	21.6	2.2	1,997	3			
Avg Small Value	\$3,079	19.3	1.8	-	23	85	3	0
Vanguard Small Cap Index Instl	\$3,706	20.1	2.4	1,436	3	14	1	0
CRSP US Small Cap	\$3,705	20.1	2.4	1,412	3			
Avg Small Blend	\$3,278	21.5	2.5	-	23	63	2	0
Vanguard Small Cap Growth Index Instl	\$3,997	28.2	3.4	678	6	27	0	0
CRSP US Small Cap Growth	\$3,995	28.2	3.4	640	6			
Avg Small Growth	\$3,664	29.8	4.2	-	25	75	3	0
American Funds New Perspective R6	\$65,838	24.0	3.3	318	19	22	47	8
MSCI ACWI	\$53,902	19.2	2.2	2,491	9			
Franklin Mutual Global Discovery Z	\$49,222	15.5	1.5	158	19	17	38	2
MSCI World	\$57,771	20.0	2.3	1,652	11			
Avg World Large Stock	\$70,078	20.9	2.5	-	26	54	45	6
Dodge & Cox International Stock	\$49,141	19.8	1.5	117	27	17	92	20
MSCI EAFE	\$36,802	17.7	1.7	926	11			
Avg Foreign Large Blend	\$42,363	18.3	1.8	-	15	57	92	7
Artisan International Inv	\$46,832	23.2	2.6	69	37	65	89	9
MSCI EAFE	\$36,802	17.7	1.7	926	11			
Avg Foreign Large Growth	\$36,748	21.8	2.8	-	14	56	92	12
Oppenheimer Developing Markets Y	\$34,680	21.2	3.1	100	0	18	89	70
MSCI EM	\$31,659	14.6	1.7	839	25			
Avg Diversified Emerging Mkts	\$29,694	15.5	2.2	-	27	65	94	70

Equity Portfolio Sector Allocation

As of September 30, 2017

(yellow shading indicates largest sector allocation)

Fund/Benchmark	Energy	Materials	Industrials	Consumer Discretionary	Consumer Staples	Healthcare	Financials	Real Estate	Information Technology	Telecom Services	Utilities
Vanguard Equity-Income Adm	9.7	3.9	11.8	5.5	13.1	14.0	17.8	0.0	13.8	3.3	7.3
Russell 1000 Value	10.8	2.9	8.6	6.7	8.7	13.9	26.0	4.9	8.2	3.0	6.3
Avg Large Value	9.5	3.0	10.6	9.1	9.1	14.0	23.0	2.1	11.9	3.1	4.7
Parnassus Core Equity Institutional	1.1	6.8	12.5	10.7	14.1	21.2	6.4	4.3	19.0	0.0	3.9
Vanguard Institutional Index I	6.1	3.0	10.2	11.9	8.2	14.5	14.6	3.0	23.2	2.2	3.1
S&P 500	6.1	3.0	10.2	11.9	8.2	14.5	14.6	3.0	23.2	2.2	3.1
Avg Large Blend	5.6	2.7	12.0	12.9	8.5	14.7	14.0	2.6	22.8	1.6	2.7
Fidelity Contrafund	1.3	1.9	6.1	15.6	2.7	10.0	17.3	0.2	44.3	0.5	0.0
S&P 500	6.1	3.0	10.2	11.9	8.2	14.5	14.6	3.0	23.2	2.2	3.1
Avg Large Growth	1.9	2.6	9.6	18.0	5.2	15.9	5.6	1.8	38.9	0.3	0.4
MFS Mid Cap Value R6	6.8	6.5	15.2	11.8	6.2	6.4	22.3	6.2	10.2	0.0	8.4
Russell Mid Cap Value	7.9	5.4	11.9	11.6	3.9	6.5	19.9	14.6	6.6	0.8	11.0
Avg Mid Value	8.0	6.0	14.8	13.6	4.3	7.3	20.0	7.4	12.0	0.5	6.3
Vanguard Mid Cap Index Adm	5.1	6.3	12.7	16.4	4.0	9.7	14.9	7.2	17.8	0.9	5.1
CRSP US Mid Cap	5.1	6.3	12.7	16.4	4.0	9.7	14.9	7.2	17.8	0.9	5.1
Avg Mid Blend	4.1	8.5	13.6	12.9	3.8	9.4	16.2	8.0	19.0	0.6	3.9
Janus Henderson Enterprise N	0.6	1.8	17.9	10.3	0.0	21.2	7.6	4.4	36.3	0.0	0.0
Russell Mid Cap Growth	2.6	6.5	16.7	17.0	4.1	14.2	7.0	3.4	28.2	0.2	0.1
Avg Mid Growth	1.9	4.4	12.5	15.9	2.6	15.4	13.1	3.5	29.5	0.2	0.9

Equity Portfolio Sector Allocation

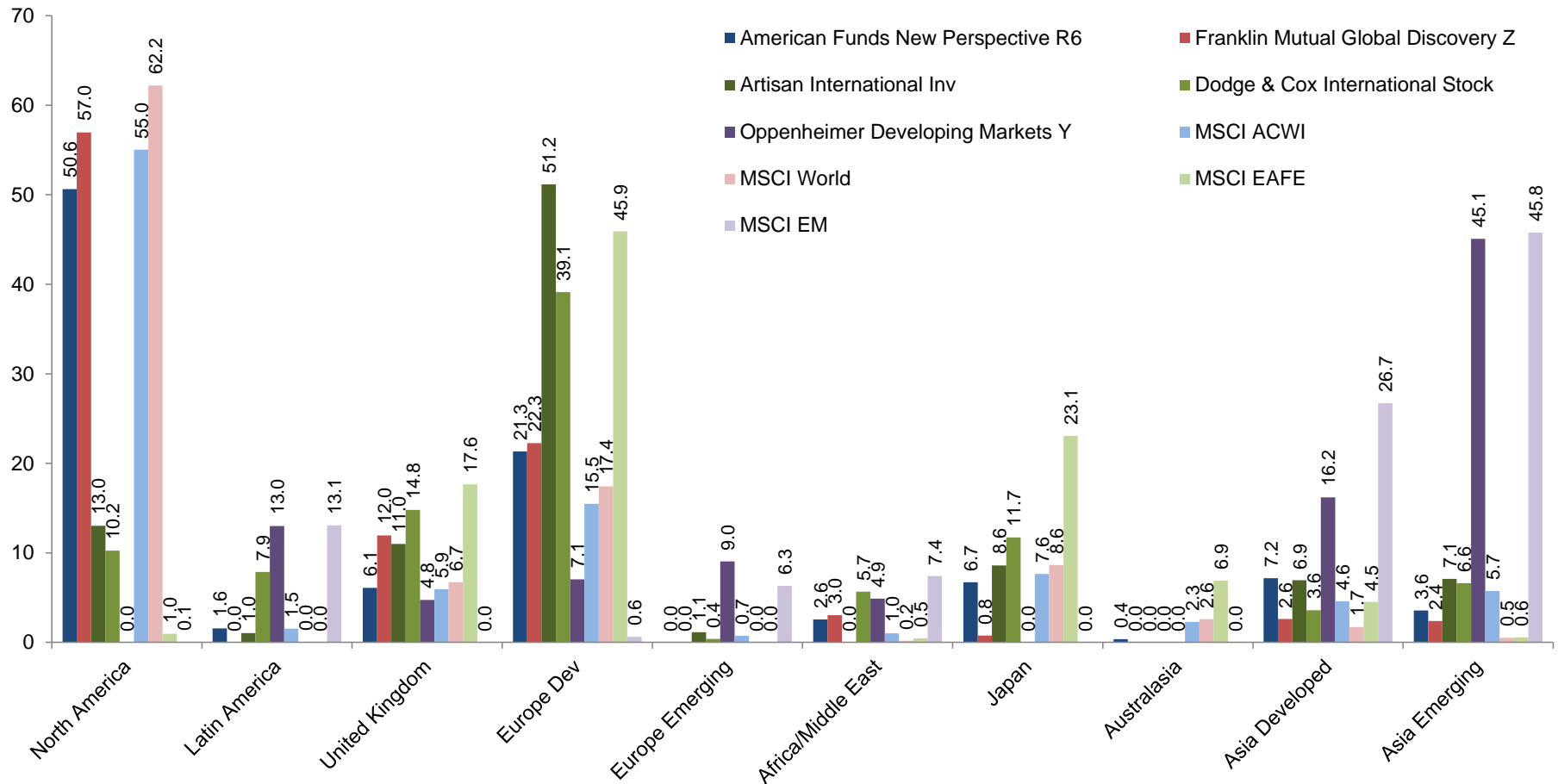
As of September 30, 2017

(yellow shading indicates largest sector allocation)

Fund/Benchmark	Energy	Materials	Industrials	Consumer Discretionary	Consumer Staples	Healthcare	Financials	Real Estate	Information Technology	Telecom Services	Utilities
Neuberger Berman Genesis Tr	2.0	7.8	21.6	12.0	6.3	13.0	17.9	0.3	19.1	0.0	0.0
Russell 2000	3.6	4.5	15.1	11.7	2.7	15.1	18.3	7.3	17.3	0.9	3.7
Avg Small Value	4.9	9.0	18.1	8.9	2.6	5.2	26.3	7.0	13.9	0.4	3.7
Vanguard Small Cap Index Instl	4.7	5.7	15.8	11.7	3.2	11.9	14.4	10.5	17.3	0.5	4.1
CRSP US Small Cap	4.7	5.7	15.8	11.7	3.2	11.9	14.5	10.6	17.3	0.5	4.1
Avg Small Blend	3.3	5.7	16.3	15.2	2.7	10.6	18.9	7.2	16.1	0.8	3.2
Vanguard Small Cap Growth Index Instl	5.0	2.9	14.0	13.2	2.7	17.9	6.5	12.0	25.0	0.5	0.3
CRSP US Small Cap Growth	5.1	2.9	14.0	13.2	2.7	17.9	6.5	12.0	25.0	0.5	0.3
Avg Small Growth	2.1	4.5	15.7	14.4	2.0	22.0	10.4	3.4	24.1	0.5	1.0
American Funds New Perspective R6	4.4	5.3	9.8	18.9	10.5	10.1	11.5	0.3	27.1	1.7	0.6
MSCI ACWI	6.2	5.2	11.0	11.8	8.8	11.3	18.7	3.2	17.8	3.1	3.1
Franklin Mutual Global Discovery Z	9.5	4.5	5.7	12.5	7.8	13.7	26.2	0.0	12.6	5.3	2.3
MSCI World	6.2	5.1	11.6	12.2	9.0	12.4	18.0	3.1	16.4	2.8	3.2
Avg World Large Stock	4.4	3.7	10.8	13.7	10.8	12.7	15.9	1.6	21.3	2.7	2.3
Dodge & Cox International Stock	8.0	6.3	8.5	17.6	0.2	15.2	27.5	0.7	12.3	3.6	0.0
MSCI EAFE	5.1	7.8	14.4	12.3	11.4	10.6	21.2	3.5	6.3	4.1	3.4
Avg Foreign Large Blend	5.0	7.8	13.7	12.0	11.0	9.7	21.1	2.7	10.4	4.2	2.4
Artisan International Inv	0.3	9.2	16.0	5.4	15.0	6.4	26.7	0.0	18.3	2.6	0.0
MSCI EAFE	5.1	7.8	14.4	12.3	11.4	10.6	21.2	3.5	6.3	4.1	3.4
Avg Foreign Large Growth	2.8	5.9	15.0	14.3	13.4	11.1	17.1	0.9	17.3	1.4	0.7
Oppenheimer Developing Markets Y	2.8	5.8	5.8	19.0	11.6	5.3	22.2	2.5	25.1	0.0	0.0
MSCI EM	6.7	7.1	5.3	10.4	6.3	2.3	23.5	2.8	28.1	4.9	2.5
Avg Diversified Emerging Mkts	5.3	5.8	4.7	11.3	10.0	3.0	23.8	2.7	26.9	4.3	2.1

International Fund Regional Allocations

As of September 30, 2017



International Fund Country Allocations

As of September 30, 2017

	Argentina	Australia	Austria	Belgium	Brazil	Canada	Chile	China	Czech Republic	Denmark	Finland	France	Germany	Greece	Hong Kong	Hungary	India	Indonesia	Ireland	Israel	Italy	Japan	Malaysia	Mexico	Netherlands
American Funds New Perspective R6		0.4		0.5	1.0	1.5		1.9		1.4	0.5	5.8	2.2		2.2		1.4		0.8			6.7		0.6	4.3
MSCI ACWI		2.2		0.4	0.9	3.2	0.1	3.8		0.6	0.3	3.4	3.2		1.0		1.0	0.3		0.2	0.7	7.6	0.3	0.4	1.3
Franklin Mutual Global Discovery Z						0.6		2.4			1.6	4.1	4.0							3.0	2.2	0.8			5.4
MSCI World		2.5		0.5		3.6		0.5		0.7	0.4	3.8	3.7		1.1				0.1	0.2	0.8	8.6			1.4

	New Zealand	Norway	Pakistan	Philippines	Poland	Portugal	Russia	Singapore	Slovakia	South Africa	South Korea	Spain	Sweden	Switzerland	Taiwan	Thailand	Turkey	United Kingdom	United States	Non-US	Venezuela	Vietnam	Lithuania	Latvia	Estonia
American Funds New Perspective R6		0.5		0.2				0.2		2.4	2.0	0.7	0.7	3.7	2.7			6.1	49.2	50.8					
MSCI ACWI		0.2		0.1	0.2		0.4	0.5		0.7	1.7	1.1	1.0	2.9	1.3	0.3	0.1	5.9	51.9	48.1					
Franklin Mutual Global Discovery Z											2.0			4.8				12.0	56.3	43.7					
MSCI World		0.3						0.6				1.3	1.1	3.3				6.7	58.6	41.4					

International Fund Country Allocations

As of September 30, 2017

	Argentina	Australia	Austria	Belgium	Brazil	Canada	Chile	China	Czech Republic	Denmark	Finland	France	Germany	Greece	Hong Kong	Hungary	India	Indonesia	Ireland	Israel	Italy	Japan	Malaysia	Mexico	Netherlands
Artisan International Inv				1.1	0.8	3.7	0.2	6.5		0.4		4.4	25.4		2.7			0.6	1.1		5.2	8.6			7.1
Dodge & Cox International Stock					4.8	3.0		3.4				12.5	6.0		0.9		3.2				2.8	11.7		3.1	2.4
MSCI EAFE		6.7	0.3	1.2				0.5		1.9	1.0	10.2	9.8		3.0				0.3	0.5	2.1	23.1			3.7

	New Zealand	Norway	Pakistan	Philippines	Poland	Portugal	Russia	Singapore	Slovakia	South Africa	South Korea	Spain	Sweden	Switzerland	Taiwan	Thailand	Turkey	United Kingdom	United States	Non-US	Venezuela	Vietnam	Lithuania	Latvia	Estonia
Artisan International Inv							1.1				2.9	1.7		4.9	1.4			11.0	9.4	90.6					
Dodge & Cox International Stock		1.2								5.4	2.7	1.6	2.1	10.5			0.4	14.8	7.2	92.8					
MSCI EAFE	0.2	0.7				0.2		1.5				3.4	2.9	8.3				17.6	1.0	99.0					

International Fund Country Allocations

As of September 30, 2017

	Argentina	Australia	Austria	Belgium	Brazil	Canada	Chile	China	Czech Republic	Denmark	Finland	France	Germany	Greece	Hong Kong	Hungary	India	Indonesia	Ireland	Israel	Italy	Japan	Malaysia	Mexico	Netherlands
Oppenheimer Developing Markets Y					5.2		0.1	23.3				4.2			3.7		13.4	2.6			1.2		1.7	5.7	1.6
MSCI EM					7.6		1.3	29.4	0.2					0.3	0.2	0.3	8.4	2.3					2.3	3.5	0.3

	New Zealand	Norway	Pakistan	Philippines	Poland	Portugal	Russia	Singapore	Slovakia	South Africa	South Korea	Spain	Sweden	Switzerland	Taiwan	Thailand	Turkey	United Kingdom	United States	Non-US	Venezuela	Vietnam	Lithuania	Latvia	Estonia
Oppenheimer Developing Markets Y				4.0	0.6		7.2	1.8		1.7	4.3				6.3		1.2	4.8		100.0		0.1			
MSCI EM				1.1	1.3		3.4			6.0	14.9				11.5	2.2	1.1			99.9					

General Fund Information

As of September 30, 2017

Fund	Manager	Average Tenure (years)	Longest Tenure (years)	Total Assets (\$MM)	Morningstar Rating Overall	Morningstar Analyst Rating	Prospectus Net Expense Ratio
Prudential Total Return Bond Q	Robert Tipp (4)*	8	15	\$34,139	★★★★★	Silver	0.43
Neuberger Berman High Income Bond Instl	Thomas P. O'Reilly (4)*	6	12	\$3,187	★★★	Silver	0.71
T. Rowe Price Retirement Balanced	Jerome A. Clark (2)*	9	15	\$2,751	★★★★	Silver	0.56
T. Rowe Price Retirement 2005	Jerome A. Clark (2)*	8	14	\$1,759	★★★★	Silver	0.58
T. Rowe Price Retirement 2010	Jerome A. Clark (2)*	9	15	\$5,428	★★★★	Silver	0.57
T. Rowe Price Retirement 2015	Jerome A. Clark (2)*	8	14	\$9,162	★★★★	Silver	0.59
T. Rowe Price Retirement 2020	Jerome A. Clark (2)*	9	15	\$25,651	★★★★★	Silver	0.63
T. Rowe Price Retirement 2025	Jerome A. Clark (2)*	8	14	\$21,287	★★★★★	Silver	0.67
T. Rowe Price Retirement 2030	Jerome A. Clark (2)*	9	15	\$27,341	★★★★★	Silver	0.69
T. Rowe Price Retirement 2035	Jerome A. Clark (2)*	8	14	\$16,342	★★★★★	Silver	0.72
T. Rowe Price Retirement 2040	Jerome A. Clark (2)*	9	15	\$19,306	★★★★★	Silver	0.74
T. Rowe Price Retirement 2045	Jerome A. Clark (2)*	7	12	\$10,163	★★★★★	Silver	0.74
T. Rowe Price Retirement 2050	Jerome A. Clark (2)*	7	11	\$8,183	★★★★★	Silver	0.74
T. Rowe Price Retirement 2055	Jerome A. Clark (2)*	7	11	\$3,479	★★★★★	Silver	0.74
Vanguard Balanced Index Instl	Joshua C. Barrickman (4)*	2	5	\$35,841	★★★★★	Gold	0.06

* Longest tenured manager listed with total number of fund managers listed in parentheses

General Fund Information

As of September 30, 2017

Fund	Manager	Average Tenure (years)	Longest Tenure (years)	Total Assets (\$MM)	Morningstar Rating Overall	Morningstar Analyst Rating	Prospectus Net Expense Ratio
Vanguard Equity-Income Adm	James P. Stetler (3)*	9	14	\$28,460	★★★★★	Silver	0.17
Vanguard Institutional Index I	Donald M. Butler (2)*	9	17	\$230,289	★★★★	Gold	0.04
Fidelity Contrafund	William Danoff	27	27	\$117,165	★★★★	Silver	0.68
Parnassus Core Equity Institutional	Todd C. Ahlsten (2)*	11	16	\$15,873	★★★★	Silver	0.66
MFS Mid Cap Value R6	Brooks A. Taylor (2)*	9	9	\$6,519	★★★★		0.75
Vanguard Mid Cap Index Adm	Donald M. Butler (2)*	10	19	\$89,327	★★★★	Gold	0.06
Janus Henderson Enterprise N	Brian Demain (2)*	6	10	\$14,229	★★★★★	Bronze	0.68
Neuberger Berman Genesis Tr	Judith M. Vale (4)*	15	24	\$11,111	★★★★	Bronze	1.10
Vanguard Small Cap Index Instl	Gerard C. O'Reilly (2)*	2	2	\$81,125	★★★★	Gold	0.05
Vanguard Small Cap Growth Index Instl	Gerard C. O'Reilly (2)*	7	13	\$20,409	★★★	Silver	0.06
American Funds New Perspective R6	Robert W. Lovelace (7)*	12	17	\$70,156	★★★★★	Gold	0.45
Franklin Mutual Global Discovery Z	Peter A. Langerman (3)*	8	8	\$22,994	★★★★	Bronze	0.99
Dodge & Cox International Stock	C. Bryan Cameron (8)*	11	16	\$65,584	★★★★	Gold	0.64
Artisan International Inv	Mark L. Yockey (3)*	11	22	\$14,032	★★	Silver	1.19
Oppenheimer Developing Markets Y	Justin M. Leverenz	10	10	\$37,097	★★★★	Silver	1.07

* Longest tenured manager listed with total number of fund managers listed in parentheses

Fee and Revenue Sharing

Fund	Prospectus Net Expense Ratio	Revenue Sharing	Expense Ratio Net of Revenue Sharing	Morningstar Category Avg Expense Ratio
Prudential Total Return Bond Q	0.43	0.00	0.43	0.78
Neuberger Berman High Income Bond Instl	0.71	0.10	0.61	1.05
T. Rowe Price Retirement Balanced	0.56	0.15	0.41	1.18
T. Rowe Price Retirement 2005	0.58	0.15	0.43	0.73
T. Rowe Price Retirement 2010	0.57	0.15	0.42	0.73
T. Rowe Price Retirement 2015	0.59	0.15	0.44	0.75
T. Rowe Price Retirement 2020	0.63	0.15	0.48	0.83
T. Rowe Price Retirement 2025	0.67	0.15	0.52	0.81
T. Rowe Price Retirement 2030	0.69	0.15	0.54	0.86
T. Rowe Price Retirement 2035	0.72	0.15	0.57	0.84
T. Rowe Price Retirement 2040	0.74	0.15	0.59	0.88
T. Rowe Price Retirement 2045	0.74	0.15	0.59	0.84
T. Rowe Price Retirement 2050	0.74	0.15	0.59	0.88
T. Rowe Price Retirement 2055	0.74	0.15	0.59	0.85
Vanguard Balanced Index Instl	0.06	0.00	0.06	1.16
Vanguard Equity-Income Adm	0.17	0.00	0.17	1.05
Vanguard Institutional Index I	0.04	0.00	0.04	0.99
Fidelity Contrafund	0.68	0.25	0.43	1.13
Parnassus Core Equity Institutional	0.66	0.10	0.56	0.99
MFS Mid Cap Value R6	0.75	0.00	0.75	1.14
Vanguard Mid Cap Index Adm	0.06	0.00	0.06	1.14
Janus Henderson Enterprise N	0.68	0.50	0.18	1.23
Neuberger Berman Genesis Tr	1.10	0.35	0.75	1.30
Vanguard Small Cap Index Instl	0.05	0.00	0.05	1.20
Vanguard Small Cap Growth Index Instl	0.06	0.00	0.06	1.29
American Funds New Perspective R6	0.45	0.00	0.45	1.22
Franklin Mutual Global Discovery Z	0.99	0.15	0.84	1.22
Dodge & Cox International Stock	0.64	0.10	0.54	1.08
Artisan International Inv	1.19	0.35	0.84	1.23
Oppenheimer Developing Markets Y	1.07	0.25	0.82	1.44

Index Fund Fee Comparison

Fund	Prospectus Net Expense Ratio	Annual Report Net Expense Ratio	Morningstar Category	Primary Prospectus Benchmark
Vanguard Total Bond Market Index I	0.04	0.04	US Fund Intermediate-Term Bond	BBgBarc US Agg Float Adj TR USD
Fidelity US Bond Index I	0.04	0.06	US Fund Intermediate-Term Bond	BBgBarc US Agg Bond TR USD
Schwab US Aggregate Bond Index	0.04	-	US Fund Intermediate-Term Bond	BBgBarc US Agg Bond TR USD
Vanguard Total Stock Market Index I	0.04	0.03	US Fund Large Blend	CRSP US Total Market TR USD
Fidelity Total Market Index I	0.04	0.04	US Fund Large Blend	DJ US Total Stock Market TR USD
Schwab Total Stock Market Index	0.03	0.09	US Fund Large Blend	DJ US Total Stock Market TR USD
Vanguard Institutional Index I	0.04	0.04	US Fund Large Blend	S&P 500 TR USD
Fidelity 500 Index I	0.04	0.04	US Fund Large Blend	S&P 500 TR USD
Schwab S&P 500 Index	0.03	0.09	US Fund Large Blend	S&P 500 TR USD
Vanguard Extended Market Index I	0.06	0.06	US Fund Mid-Cap Blend	S&P Completion TR USD
Fidelity Extended Market Index Prem	0.07	0.07	US Fund Mid-Cap Blend	DJ US Completion Total Stock Mkt TR USD
Vanguard Mid Cap Index I	0.05	0.05	US Fund Mid-Cap Blend	CRSP US Mid Cap TR USD
Fidelity Mid Cap Index I	0.06	0.06	US Fund Mid-Cap Blend	Russell Mid Cap TR USD
Vanguard Small Cap Index I	0.05	0.05	US Fund Small Blend	CRSP US Small Cap TR USD
Fidelity Small Cap Index I	0.06	0.06	US Fund Small Blend	Russell 2000 TR USD
Schwab Small Cap Index	0.05	0.17	US Fund Small Blend	Russell 2000 TR USD
Vanguard Total Intl Stock Index I	0.09	0.09	US Fund Foreign Large Blend	FTSE Global All Cap ex US (USA) NR USD
Fidelity Total Intl Index I	0.09	0.09	US Fund Foreign Large Blend	MSCI ACWI Ex USA IMI NR USD
Vanguard Developed Markets Index I	0.06	0.06	US Fund Foreign Large Blend	FTSE Dvlp ex US All Cap(US RIC)NR USD
Fidelity International Index I	0.06	0.06	US Fund Foreign Large Blend	MSCI EAFE NR USD
Schwab International Index	0.06	0.19	US Fund Foreign Large Blend	MSCI EAFE NR USD
Vanguard Emerging Mkts Stock Index I	0.11	0.11	US Fund Diversified Emerging Mkts	FTSE EMs AC China A Incl (US RIC) NR USD
Fidelity Emerging Markets Index I	0.11	0.12	US Fund Diversified Emerging Mkts	MSCI EM NR USD

Glossary of Investment Terms

Alpha is a measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta. A positive Alpha figure indicates the portfolio has performed better than its beta would predict. In contrast, a negative Alpha indicates the portfolio has underperformed, given the expectations established by beta.

Average Credit Quality gives a snapshot of the portfolio's overall credit quality. It is an average of each bond's credit rating, adjusted for its relative weighting in the portfolio. For corporate bond and municipal bond funds, Morningstar also shows the percentage of fixed-income securities that fall within each credit-quality rating, as assigned by Standard & Poor's or Moody's. Because it's rare to find individual bonds in a portfolio with a rating below B, the average credit quality of bond funds in Morningstar's database ranges from AAA (highest) to B (lowest). AAA bonds carry the highest credit rating, while bonds issued by speculative companies usually carry the lowest credit ratings. For taxable bonds, anything at or below BB is considered a high-yield or junk bond. For the purpose of Morningstar's calculations, U.S. government bonds are considered AAA and other nonrated bonds generally are considered B.

Average Duration is a measure of a fund's interest-rate sensitivity. The longer a fund's duration, the more sensitive the fund is to shifts in interest rates. Duration is determined by a formula that includes coupon rates and bond maturities. Small coupons tend to increase duration, while shorter maturities and higher coupons shorten duration.

Average Maturity is a weighted average of all the maturities of the bonds in a portfolio, computed by weighting each bond's effective maturity by the market value of the security. Average effective maturity takes into consideration all mortgage prepayments, puts, and adjustable coupons. Longer-maturity funds are generally considered more interest-rate sensitive than their shorter counterparts.

Batting Average is a measure of a manager's ability to consistently beat the market. It is calculated by dividing the number of months in which the manager beat or matched an index by the total number of months in the period. For example, a manager who meets or outperforms the market every month in a given period would have a batting average of 100. A manager who beats the market half of the time would have a batting average of 50.

Beta is a measure of systematic risk with respect to a benchmark. Systematic risk is the tendency of the value of the fund and the value of benchmark to move together. Beta measures the sensitivity of the fund's excess return (total return minus the risk-free return) with respect to the benchmark's excess return that results from their systematic co-movement. It is the ratio of what the excess return of the fund would be to the excess return of the benchmark if there were no fund-specific sources of return. If beta is greater than one, movements in value of the fund that are associated with movements in the value of the benchmark tend to be amplified. If beta is one, they tend to be the same, and if beta is less than one, they tend to be dampened. If such movements tend to be in opposite directions, beta is negative. Beta is measured as the slope of the regression of the excess return on the fund as the dependent variable and the excess return on the benchmark as the independent variable. The beta of the market is 1.00 by definition. Morningstar calculates beta by comparing a portfolio's excess return over T-bills to the benchmark's excess return over T-bills, so a beta of 1.10 shows that the portfolio has performed 10% better than its benchmark in up markets and 10% worse in down markets, assuming all other factors remain constant. Conversely, a beta of 0.85 indicates that the portfolio's excess return is expected to perform 15% worse than the benchmark's excess return during up markets and 15% better during down markets.

Downside Capture Ratio measures a manager's performance in down markets relative to the market (benchmark) itself. For example, if the ratio is 90%, the manager has captured 90% of the down-market and outperformed the market on the downside.

Geometric Average Market Cap provides a measure of the size of the companies in which the fund invests. It is the weighted mean of the market capitalizations of the stocks in the fund's portfolio and is calculated by raising the market capitalization of each stock to a power equal to that stock's stake in the portfolio. The resulting numbers are multiplied together to produce the geometric mean of the market caps of the stocks in the portfolio, which is reported as average market capitalization.

Information Ratio is a risk-adjusted performance measure. The information ratio is a special version of the Sharpe Ratio in that the benchmark is typically the fund's performance benchmark instead of the risk free rate. A higher information ratio indicates higher active returns per unit of active risk while a lower information ratio may indicate low levels of active returns, high levels of active risk or both.

Morningstar Analyst Rating is based on the Morningstar analyst's conviction in the fund's ability to outperform its peer group and/or relevant benchmark on a risk-adjusted basis over the long term. The 5 ratings include Gold, Silver, Bronze, Neutral, and Negative. If a fund receives a positive rating of Gold, Silver, or Bronze, it means Morningstar analysts think highly of the fund and expect it to outperform over a full market cycle of at least five years.

Morningstar Star Rating funds are ranked within their Morningstar categories according to their risk-adjusted return (after accounting for all sales charges and expenses), and stars are assigned such that the distribution reflects a classic bell-shaped curve with the largest section in the center. The 10% of funds in each category with the highest risk-adjusted return receive five stars, the next 22.5% receive four stars, the middle 35% receive three stars, the next 22.5% receive two stars, and the bottom 10% receive one star.

P/B Ratio is the weighted average of the price/book ratios of all the stocks in a portfolio. The P/B ratio of a company is calculated by dividing the market price of its stock by the company's per-share book value. Stocks with negative book values are excluded from this calculation. In theory, a high P/B ratio indicates that the price of the stock exceeds the actual worth of the company's assets, while a low P/B ratio indicates that the stock is a bargain. In practice, book value is an accounting number and for a variety of reasons may not reflect the actual value assigned to a company or security by market participants.

P/E Ratio is the weighted average of the price/earnings ratios of all the stocks in a portfolio. A fund's price/earnings ratio can act as a gauge of the fund's investment strategy in the current market climate, and whether it has a value or growth orientation. Companies in those industries enjoying a surge of popularity tend to have high P/E ratios, reflecting a growth orientation. More staid industries tend to have low P/E ratios, reflecting a value orientation. Morningstar generates this figure in-house on a monthly basis, based on the most-recent portfolio holdings submitted by the fund and stock statistics gleaned from our internal U.S. equities databases. Negative P/Es are not used, and any P/E greater than 60 is capped at 60 in the calculation of the average.

Peer Group Ranking is the fund's total-return percentile rank relative to all funds that have the same Morningstar Category. Morningstar categorizes funds based on their portfolio holdings (portfolio statistics and compositions over the past 3 years). The highest (or most favorable) percentile rank is 1 and the lowest (or least favorable) percentile rank is 100. The top-performing fund in a category will always receive a rank of 1.

Sharpe Ratio is a risk-adjusted measure developed by Nobel Laureate William Sharpe. It is calculated by using standard deviation and excess return to determine reward per unit of risk. The higher the Sharpe Ratio, the better the fund's historical risk-adjusted performance. The Sharpe ratio is calculated for the past 36-month period by dividing a fund's annualized excess returns by the standard deviation of a fund's annualized excess returns. Since this ratio uses standard deviation as its risk measure, it is most appropriately applied when analyzing a fund that is an investor's sole holding. The Sharpe Ratio can be used to compare two funds directly on how much risk a fund had to bear to earn excess return over the risk-free rate.

Standard Deviation is a statistical measurement of dispersion about an average, which, for a mutual fund, depicts how widely the returns varied over a certain period of time. Investors use the standard deviation of historical performance to try to predict the range of returns that are most likely for a given fund. When a fund has a high standard deviation, the predicted range of performance is wide, implying greater volatility.

Total Return is determined by taking the change in net asset value, reinvesting all income and capital-gains distributions, and dividing by the starting net asset value (NAV). Reinvestments are made using the actual reinvestment NAV, and daily payoffs are reinvested monthly. Total return is expressed as a percentage.

Tracking Error is a measure of the volatility of excess returns relative to a benchmark.

Turnover Ratio is a measure of the fund's trading activity which is computed by taking the lesser of purchases or sales (excluding all securities with maturities of less than one year) and dividing by average monthly net assets. A turnover ratio of 100% or more does not necessarily suggest that all securities in the portfolio have been traded. In practical terms, the resulting percentage loosely represents the percentage of the portfolio's holdings that have changed over the past year. A low turnover figure (20% to 30%) would indicate a buy-and-hold strategy while a high turnover (more than 100%) would indicate an investment strategy involving considerable buying and selling of securities.

Upside Capture Ratio measures a manager's performance in up markets relative to the market (benchmark) itself. For example, if the ratio is 110%, the manager has captured 110% of the up-market and outperformed the market on the upside.

Sector Definitions

- **Energy Sector:** The Energy Sector comprises companies whose businesses are dominated by either of the following activities: The construction or provision of oil rigs, drilling equipment and other energy related service and equipment, including seismic data collection. Companies engaged in the exploration, production, marketing, refining, and/or transportation of oil and gas products, coal and other consumer fuels.
- **Materials Sector:** The Materials Sector encompasses a wide range of commodity-related manufacturing industries. Included in this sector are companies that manufacture chemicals, construction materials, glass, paper, forest products and related packaging products, and metals, minerals and mining companies, including producers of steel.
- **Industrials Sector:** The Industrials Sector includes companies whose businesses are dominated by one of the following activities: The manufacture and distribution of capital goods, including aerospace and defense, construction, engineering and building products, electrical equipment and industrial machinery. The provision of commercial services and supplies, including printing, employment, environmental and office services. The provision of transportation services, including airlines, couriers, marine, road and rail and transportation infrastructure.
- **Consumer Discretionary Sector:** The Consumer Discretionary Sector encompasses those industries that tend to be the most sensitive to economic cycles. Its manufacturing segment includes automotive, household durable goods, textiles and apparel and leisure equipment. The services segment includes hotels, restaurants and other leisure facilities, media production and services, and consumer retailing and services.
- **Consumer Staples Sector:** The Consumer Staples Sector comprises companies whose businesses are less sensitive to economic cycles. It includes manufacturers and distributors of food, beverages and tobacco and producers of non-durable household goods and personal products. It also includes food and drug retailing companies as well as hypermarkets and consumer super centers.
- **Health Care Sector:** The Health Care Sector encompasses two main industry groups. The first includes companies who manufacture health care equipment and supplies or provide health care related services, including distributors of health care products, providers of basic health-care services, and owners and operators of health care facilities and organizations. The second regroups companies primarily involved in the research, development, production and marketing of pharmaceuticals and biotechnology products.
- **Financials Sector:** The Financials Sector contains companies involved in banking, thrifts & mortgage finance, specialized finance, consumer finance, asset management and custody banks, investment banking and brokerage and insurance. It also includes Financial Exchanges & Data and Mortgage REITs.
- **Real Estate Sector:** The Real Estate Sector contains companies engaged in real estate development and operation. It also includes companies offering real estate related services and Equity Real Estate Investment Trusts (REITs).
- **Information Technology Sector:** The Information Technology Sector covers the following areas: firstly, Technology Software and Services, including companies that primarily develop software in various fields such as the Internet, applications, systems, database management and/or home entertainment, and companies that provide information technology consulting and services, as well as data processing and outsourced services; secondly, Technology Hardware and Equipment, including manufacturers and distributors of communications equipment, computers and peripherals, electronic equipment and related instruments; and thirdly, Semiconductors and Semiconductor Equipment Manufacturers.

- **Telecommunications Services Sector:** The Telecommunications Services Sector contains companies that provide communications services primarily through a fixed-line, cellular, wireless, high bandwidth and/or fiber optic cable network.
- **Utilities Sector:** The Utilities Sector encompasses those companies considered electric, gas or water utilities, or companies that operate as independent producers and/or distributors of power.

Regional Definitions

- **North America:** United States and Canada
- **Emerging Central & Latin America:** Mexico and Central and South America
- **United Kingdom:** England, Northern Ireland, Scotland, Wales
- **Developed Europe:** Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain
- **Emerging Europe:** Russia and other Eastern European countries
- **Africa/Middle East:** Africa and Western Asian countries
- **Japan:** Japan
- **Australasia:** Australia and New Zealand
- **Developed Asia:** Hong Kong, Singapore, South Korea
- **Emerging Asia:** China, India, Indonesia, Malaysia, Philippines, Thailand

CONDUENT



**Client has the authority to select investments and investment managers. Past performance is not indicative of future results.
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